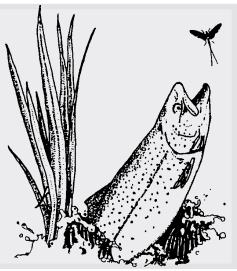
Stream Advocate



Adopt-A-Stream Program Newsletter *Spring 2003*

NONPOINT SOURCE PROJECTS FOR RIVER PROTECTION

The Adopt-A-Stream Program invites Stream Teams to partner with communities and work on stormwater issues and projects. Stormwater represents a significant threat to local waterways because it carries with it pollution from various land uses and its considerable volume impacts sensitive stream systems by disrupting natural flow patterns. Stream Teams can work to improve the health of local waterways by first reducing the amount of water that enters the stormwater system and secondly by cleaning up everyday practices that contribute pollution to stormwater runoff.

Rain water falling on impervious surfaces such as driveways and sidewalks is not absorbed into ground but instead picks up sediment and pollutants as it runs down paved surfaces into stormdrains and ultimately into our local rivers and streams. The impact is two fold; pollutant levels increase while degrading water quality and habitat, and less water infiltrates into groundwater reducing natural river flows.

In initial surveys most Stream Teams identified specific areas with stormwater and nonpoint source problems. For those Stream Teams who choose to work on stormwater problems, groups can either assess the action plans and find remediation projects or conduct followup surveys to identify non-point source pollution. We recommend Stream Teams choose projects based on low-impact development designs that treat rainwater where it falls by allowing for greater infiltration and storage. In addition, one of the major benefits of these projects is that they can be used to educate the public and the municipality about the techniques and ease of implementation, as well as the large benefits and low costs of such solutions.

Stream Teams can be an important catalyst for achieving better stream health. The Adopt-A-Stream program highlights the following projects as ones that can be readily done by all Stream Teams. By instituting these programs, Stream Teams will begin to change the way people think about stormwater and improve the health of our streams. *Adopt-A-Stream staff are available to help with project planning, review, facilitation and finding sources of funding.*

Projects to Reduce Stormwater

Reducing stormwater runoff will prevent deterioration of water quality and habitat and increase ground water recharge. Experts in the field have developed many innovative stormwater reduction methods that can be adapted easily and inexpensively in many situations. Stream Teams can partner with Planning Boards or DPWs to start implementing new ways of dealing with stormwater. Successful partnering could work to reduce unnecessary impervious areas (paved areas) and substitute pervious areas (porous pavement, gravel, vegetation). Stream Teams can encourage DPWs to replace concrete swales with water quality improving grass channels or concave vegetated areas.

Rain Barrel Demonstration Project

By storing rainwater, rain barrels reduce runoff from down spouts— and decrease water demand on rivers and reservoirs during the hot summer months. Collecting roof runoff means less stormwater will be going directly into the municipal stormdrain system. Rainwater tends to have fewer sediments and dissolved minerals than municipal water and is therefore ideal for vegetable gardens, flower beds, houseplants, car washing, and cleaning windows. Reducing the use of municipal water will also save homeowners money. A good formula to remember: 1 inch of rain on a 1000 sq ft roof yields 623 gallons of water. Multiply that times the average of 40 inches of rain per year in Massachusetts, and that, with enough rain barrels, could add up to 25,000 gallons of water per year.

Stream Team rain barrel projects can be as simple as conducting a single demonstration project in a central location and ensuring that a supply of rainbarrels are available for those who wish to use them.

Purchase rain barrels or retrofit your own from hardware store materials. Select a demonstration spot that is highly visible (town hall, town library, a popular downtown business) and install the rain barrels on one or more gutter downspouts. Use educational signage to demonstrate the amount of water saved, how it can be used and the benefits. Provide designs for how to create a rain barrel from store-bought materials, or a list of retailers.

Educate the local garden center or hardware store about the use of rain barrels. Once it catches on, they will want to be the ones supplying the materials!

Rain Garden Demonstration Project

Rain gardens divert water from traditional stormdrains into a larger garden area to allow water to be absorbed by plants and naturally infiltrate back into groundwater supplies, reducing the volume of water and pollutants to stormdrains. The Great Barrington Land Conservancy installed a rain garden at the entrance to the Housatonic River Walk, planted with native species. The rain garden also includes a retention basin that provides runoff control from nearby roads and parking lots by storing water in a shallow pool. Education material informs the public about how natural systems like wetlands help to clean stormwater and protect the river from contaminated runoff.

continued

River Buffer Planting

Vegetated buffers reduce runoff, offer erosion control and greater infiltration of stormwater. Buffers can be easily planted in small areas by homeowners and in larger community lots and parks. The Manchester Stream Team, with the assistance of Salem Sound Coastwatch and the town, received a Riverways Small Grant to improve an area of riparian buffer with native plantings, clearing it of invasive species. Volunteers planted over 100 trees, shrubs and wildflowers at the site. Native plants such as sugar maple, silky dogwood, blueberry, winterberry, elderberry, sweet fern and cardinal flower were chosen because they fit the site conditions, provide food value for wildlife and would eventually shade the stream to enhance smelt habitat. To begin working on a similar project, find either a public or a private site and gain permission from the land owner. Work with your local Conservation Commission as you plan the project. Approval from the Conservation Commission is needed for specific site plans to work in the riparian area. Consider the site conditions such as sun/shade, soils and amount of flooding or saturation. Groups can obtain a list of suitable plants from the Riverways Programs. Recruit volunteers and publicize the project through the local media describing the positive impacts on the stream.

Stormwater Education Projects

Stream Teams may chose to work on education projects; here are a few they can consider: developing educational campaigns such as displays, fact sheets and fliers on the problem of stormwater; conducting a stormdrain stenciling awareness project; alerting the community through specific waste awareness and prevention campaigns; creating a river friendly certification program.

Stormdrain Stenciling: Connecticut Watershed Storm Drain Stenciling Pilot Program

Through storm drain stenciling, communities label storm drains with a simple message that reminds passersby that storm drains connect to local water bodies and that dumps pollutants into those waters. In addition, storm drain education messages educate residents and community members about the impacts of non-point source pollution on local water bodies. Every time it rains, water washes litter, motor oil, anti-freeze, pet wastes, excess fertilizers and pesticides, leaves, grass clippings and other waste materials into storm drains. Most storm drains carry the contaminated rainwater directly to local streams, rivers, lakes and ponds.

As part of the NPDES Phase II Stormwater Program (*see sidebar*), cities and towns must enact a by-law or ordinance making it illegal to dump material into the stormdrain system. Towns must also identify sources of illicit discharges to the system and monitor stormdrain outfalls. Storm drain stenciling programs will be an important part of local management and will encourage participation in Shoreline Surveys and Stream Team activities.

To help address the problem of storm water runoff and nonpoint source pollution, the Connecticut River Watershed Team funded a project in FY '02 through the Riverways Programs to conduct stormdrain stenciling and outreach throughout the Connecticut River Watershed. The Connecticut River Stormdrain Education Coordinator Carrie Banks launched several pilot projects. For each project, local organizers including Conservation Commissions, Departments of Public Works (DPWs), Eagle Scouts, college students and local residents partnered to organize stormdrain education activities.

Carrie also developed a toolkit called the Stormdrain Education Notebook that includes outreach materials, fact sheets, background and other materials municipalities and civic organizations can use to implement a storm drain-stenciling program in their local community. As a result of Carrie's efforts, the Franklin, Hampshire, Hampden Conservation Districts applied for funds through the Northeast Utilities Environmental Community Grant to reproduce the toolkit and to distribute it to all of the communities in the Connecticut River Watershed.

If you would like more information or a digital copy of the Storm Drain Education Notebook, contact the Adopt-A-Stream Program 617-626-1549 or see our website at www.massriverways.org.

Pet Waste Education and Cleanup Campaign

Are there spots in your watershed or along your river or stream that seem to accumulate dog waste? Dog waste can be a serious threat to the health of the local stream by introducing nutrients, bacteria and other pathogens into the water system. This is especially dangerous in drinking water protection areas. Several Stream Team Action Plans have identified pet waste areas as particular problems.

By providing pet waste bags and disposal containers to dog walkers, less waste will be left on the ground where it can contaminate local waterways. Including educational material near the container will let pet owners know about the hazards of leaving pet waste to wash into the stormdrain system.

Pet waste bag dispensers can be purchased or created. New products like lumber made of recycled plastic make good materials for building dispenser boxes. Work with the local High School shop classes to start this as a community service project. Purchase bags and place the dispensers in high volume spots around town (at parks, walking trails, picnic areas etc.). Add educational material to the dispensing boxes about the danger pet waste poses to stream health.

Car Care and Motor Oil Recycling Education Campaign

Many car maintenance and car care products such as motor oil, antifreeze, cleaners and waxes contain toxic chemicals that can contaminate streams and other surface and ground water. Far too many people do not understand the environmental hazard of dumping care waste onto the ground or into a storm drain. A 1993 EPA survey revealed that 35% of Providence, Rhode Island residents are do-it-yourselfers and of those, 30% dumped car waste in their back yards, 7% poured it down storm drains, and 5% poured it onto roads. Of people in Massachusetts who change their own anti-freeze, 54% reported that they flush their radiators onto the ground.

Education examples:

Involve retailers of motor oil in promoting recycling and proper disposal of used oil. Create a brochure and list of local oil recycling locations and produce a display for stores where motor oil is sold. Train the store employees to give out educational material to everyone who buys oil or anti-freeze. Have retailers provide coupons for buying oil disposal containers.

Involve schools in promoting oil disposal containers to make it easier to change oil safely. Have students market and sell the containers. Involve vocational schools and auto mechanic classes in education about proper car care and disposal.

For more information on any of these projects and for assistance with implementing projects please call the Adopt-A-Stream Program, 617-626-1549.

STREAM TEAM UPDATES

Across Massachusetts Stream Teams are moving from Shoreline Surveys to implementing projects from Action Plans.

Piloting new survey methods for wildlife passage

Two new Stream Teams have piloted a new survey to assess degraded and poorly constructed culverts which can be barriers to fish and wildlife passage. UMass Extension is working with the River Restore Program on the River Continuity Project in the Connecticut and Chicopee Watersheds. In the Connecticut watershed, **Pecousic Brook** winds through East Longmeadow and Springfield before emptying directly into the Connecticut River. Several volunteers worked with the project coordinator and the new datasheets to help refine and suggest changes to make the process smoother for volunteers. **Moose Brook Shoreline Survey** volunteers, in the Chicopee Watershed towns of Hardwick and Barre, received a joint training from Adopt-A-Stream and UMass and used the River Continuity datasheets in addition to the standard forms used by Stream Team volunteers.

Ultimately, information collected through the River Continuity surveys will be directed to Highway Departments and Conservation Commissions to be taken into consideration when culvert repairs and replacements are made. When ready, datasheets and protocols will be available through the Adopt-A-Stream Program.

Community Displays

An effective method of reaching many people in town is a display with information on your Stream Team and river placed in a well traveled area in the community. The **Middleton Stream Team** completed a display which resides in a case in a local bank entryway in the town center. They plan to periodically add new information to keep the display current. The **Hopkinton Stream Team** had a display in the town library for the month of October, including highlights from their spring 2002 Shoreline Survey. Winter and spring 2003 the Stream Team is hosting an environmental speaker series to bring more awareness to the community about the water resources and the valuable habitat areas in the town. Both the Ipswich Watershed and the Upper Sudbury Watershed are areas with existing and increasing pressure on water resources. Both Stream Teams hope to reach a broad community spectrum with messages of protecting local waterways.

River Cleanup

Big Kudos go to the **Shawsheen Watershed Environmental Action Team** (SWEAT) - and believe us they do - for removing a whopping total of 759 tires from the Shawsheen River during their 2002 clean-up season. On the Shawsheen River in Lawrence alone, the team pulled out 519 tires, including truck and car tires. Using the conservative average weight of 15 pounds for each tire, that makes 7,785 pounds of rubber pulled from the river in Lawrence (four and a half tons). This year's disposal costs were supported by a grant from New England Grassroots Environmental Fund.

When storms come and sweep away the silt once held in place by the tires the team has pulled, another layer of tires will reappear, and they estimate pulling another 500 tires from the river next year as well. The team has been at this for more than 10 years and literally several thousand tires no longer make their home in the Shawsheen River. Thanks to their work, much of the instream habitat has been returned to the mainstem along with fish and fish predators (kingfishers, herons and ospreys). Deer, fox, mink, beaver and otter are all now common on the river. Congratulations for your continued good work!

Webpage highlights river and Stream Team

The **Weweantic Stream Team** completed their Shoreline Survey Report, and are working on several issues which impact the health of the river. In doing the Shoreline Survey, the Stream Team found a dam restricting the tidal flow upstream that is not currently listed in the atlas of tidal restrictions- an impediment to natural tidal flushing. They are working to have the dam listed.Tim Watts, of the Stream Team, has put together a website for several of the southeastern rivers with pictures, stories and video. Included on the site is the Weweantic Stream Team Shoreline Survey Report and Action Plan, as well as pictures and video detailing specific issues. The Stream Team received an Adopt-A-Stream award and presented their report to the Board of Selectmen, who praised their work and offered support.

Stream Team clears fishway

The Commonwealth Ave. to Cutler Park Stream Team received permission and help from the MDC in November to clear out the debris and broken baffles from the fishway at the Cordingly Dam in Wellesley. New baffles are being built for the fishway, and the group will be working with the MDC, Charles River Watershed Team and the Division of Marine Fisheries to complete the installation of the baffles and construction of a trash rack.

The NoNasties brave the weather to clean a fishway on the Charles River.

New Surveys

Groups are working to plan for surveys in the following communities: Chelmsford- River Meadow Brook; Northfield- Four River; Taunton River; Westport River.

If you have any questions or suggestions for Stream Teams in your watershed, please call the Adopt-A-Stream Program at 617-626-1549. *Read Stream Teams updates in the Fall Riverways Newsletter for more on the important work Stream Teams are doing to protect our streams across Massachusetts. Available online at www.massriverways.org*

Rivers Month is Coming June 2003

List your river event!!

As you (may) know, since 1988 Riverways has compiled an annual Massachusetts Rivers Month Calendar as part of the national celebration of Rivers Month each June. The calendar is made available to thousands of river enthusiasts across the state and is a great way for watershed and other groups to publicize their river protection and/or restoration efforts. *Please note that this year's calendar will only be posted online.*

To include all river-related events (canoe trips, river festivals, river art exhibitions, etc.) taking place in Massachusetts between 5/10-7/6/03, we are requesting that all event sponsors fill in and return the following Rivers Month event form for the Mass. Rivers Month Calendar by Friday, April 25th, 2003. (NOTE: We cannot guarantee that information submitted after that date will make it into the Calendar.) Please copy this form for multiple events.

May 10th through July 6th, 2003
2003 Massachusetts Rivers Month Events

Name of Event:
Date and Time of Event:
Location of Event:
Watershed group and/or other sponsor:
Contact Person:
Mailing address:
Phone:
E-mail/Web:
Description of event:

Email information on or before Friday April 25th, to **Eileen.Goldberg@state.ma.us**

The **Adopt-A-Stream Program** works to support and encourage local stream teams and communities in efforts to protect and restore the ecological integrity of the Commonwealth's watersheds; rivers, streams and adjacent lands.

For more information or to receive our newsletter, please contact:

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Amy Singler, *Stream Team Organizer*
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Adopt-A-Stream Program
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(617) 626-1549
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Also check out our web-site:
www.massriverways.org

Riverways Programs, Joan Kimball, Director
Department of Fisheries, Wildlife and Environmental Law Enforcement, David M. Peters, Commissioner
Executive Office of Environmental Affairs, Ellen Roy Herzfelder, Secretary

Forms for mailing/faxing- See www.massriverways.org

Questions or comments about Rivers Month- Please contact Russ Cohen at (617) 626-1543 or russ.cohen@state.ma.us

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